

### **REMARKS**

This paper responds to the Office Action mailed on March 31, 2006.

Claims 4, 9, 26, 30, 79, 80, 85, 86, 92, 97, 98, 103, 104, 112, 116, 120, 124 are amended, claims 27, 31, 82, 89, 95, 101 are canceled without prejudice or disclaimer, and claims 128- 153 are added; as a result, claims 2-11, 13-26, 32, 74-80, 83-86, 90-92, 96-98, 102-104, 106, 111-117, 119-125, and 127-153 are now pending in this application.

The claims canceled herein are canceled without prejudice or disclaimer. Applicant expressly reserves the right to file a further application directed to this subject matter.

#### **§102 Rejection of the Claims**

Claim 4 was rejected under 35 U.S.C. § 102(b) for anticipation by Shinriki et al. (U.S. 4,937,650). Claim 4 now recites “a single compound, dielectric layer interposed between the first electrode and the second electrode; . . . a metal oxide buffer layer intermediate and directly adjoining the dielectric layer and one of the first and second electrodes; wherein the buffer layer has a orthorhomic crystalline structure; and wherein an electrode selected from the group consisting of the first electrode and the second electrode has a metal component that is the same as a metal component of the buffer layer.” Applicant can not find these features in Shinriki. Accordingly, applicant requests allowance of claim 4.

Claims 9-11 were rejected under 35 U.S.C. § 102(b) for anticipation by Shinriki et al. Claim 9 now recites, in part, “wherein at least one of the first electrode and the second electrode include a metal nitride; . . . a metal oxide buffer layer interposed between and directly adjoining the dielectric layer and one of the first and second electrodes, wherein the metal oxide buffer layer includes a refractory metal that is the same refractory metal as in at least one of the first electrode and the second electrode.” Applicant can not find these features in Shinriki. Accordingly, applicant requests allowance of claim 9 and claims 10-11 depending therefrom.

Claim 26 was rejected under 35 U.S.C. § 102(b) for anticipation by Shinriki et al. Applicant respectfully traverses as all of the elements of claim 26 are not found in the reference. However, to move the application to allowance, applicant rewrites claim 26 to include the subject matter of claim 27, which was indicated as allowable. Allowance of claim 26 is requested.

Claims 30 and 32 were rejected under 35 U.S.C. § 102(b) for anticipation by Shinriki et al. Applicant respectfully traverses as all of the elements of claim 30 are not found in the reference. However, to move the application to allowance, applicant rewrites claim 30 to include the subject matter of claim 31, which was indicated as allowable. Allowance of claim 26 is requested.

§103 Rejection of the Claims

Claim 79 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ino (U.S.4,899,203) in view of Shinriki et al. (U.S. 4,937,650). Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. However, applicant further amends claim 79 to include the subject matter of claim 82, which was indicated as allowable. Allowance of claim 79 is requested

Claim 80 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ino in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. However, applicant further amends claim 80 to include the subject matter of claim 82, which was indicated as allowable. Allowance of claim 80 is requested

Claim 85 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoneda (U.S.5,177,574) in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. However, applicant further amends claim 85 to include the subject matter of claim 89, which was indicated as allowable. Allowance of claim 85 is requested.

Claim 86 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoneda in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. However, applicant further amends claim 86 to include the subject matter of claim 89, which was indicated as allowable. Allowance of claim 86 is requested.

Claim 92 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu et al. (U.S.5,856,937) in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. However, applicant further amends claim 92 to include the subject matter of claim 89, which was indicated as allowable. Allowance of claim 92 is requested.

Claim 97 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Le et al. (U.S.5,867,444) in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. However, applicant further amends claim 97 to include the subject matter of claim 95, which was indicated as allowable. Allowance of claim 97 is requested.

Claim 98 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Le et al. in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. However, applicant further amends claim 98 to include the subject matter of claim 95, which was indicated as allowable. Allowance of claim 98 is requested.

Claim 103 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Le et al. in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. However, applicant further amends claim 103 to include the subject matter of claim 101, which was indicated as allowable. Allowance of claim 103 is requested.

Claim 104 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Le et al. in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. However, applicant further amends claim 104 to include the subject matter of claim 101, which was indicated as allowable. Allowance of claim 104 is requested.

Claim 112 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoneda in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. Claim 112 now recites, in part, “a first electrode including a first metal; a second electrode including a second metal; . . . wherein at least one of the first metal and second metal include a metal that is the same as a metal in the metal oxide buffer.” These features are not taught or suggested in the applied references. Allowance of claim 112 is requested.

Claims 116 and 117 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoneda in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. Claim 116 now recites, in part, “a first electrode including a first metal; . . . a metal oxide buffer layer . . . , wherein the metal oxide buffer layer includes a refractory metal that is the same as the first metal.” These features are not taught or suggested in the references. Claim 117 depends from claim 116. Accordingly, allowance of claims 116 and 117 is requested.

Claim 120 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Le et al. in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. Claim 120 now recites, in part, “a first electrode including a first metal; . . . a metal oxide buffer layer . . . , wherein the buffer layer has a orthorhombic crystalline structure and includes the first metal.” These features are not taught or suggested in the references. Allowance of claim 120 is requested.

Claims 124 and 125 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Le et al. in view of Shinriki et al. Applicant respectfully traverses as a *prima facie* case of obviousness has not been set forth. Claim 124 now recites, in part, “a first electrode including a refractory metal; . . . wherein the metal oxide buffer layer includes a refractory metal that is the same as the refractory metal of the first electrode.” These features are not taught or suggested in the references. Claim 125 depends from claim 124. Accordingly, allowance of claims 124 and 125 is requested.

Allowable Subject Matter

Claims 2, 3, 5-8, 13-25, 29, 74-78, 83, 84, 90, 91, 96, 102, 106, 111, 113-115, 119, 121-123 and 127 were allowed.

Claims 27, 31, 82, 89, 95 and 101 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The allowable subject matter of claim 27 was rewritten into its parent claim 26. Accordingly, claim 26 is now allowable.

The allowable subject matter of claim 31 was rewritten into its parent claim 30. Accordingly, claim 30 is now allowable.

The allowable subject matter of claim 82 was rewritten into its parent claim 80. Accordingly, claim 80 is now allowable.

The allowable subject matter of claim 89 was rewritten into its parent claim 92. Accordingly, claim 92 is now allowable.

The allowable subject matter of claim 95 was rewritten into its parent claim 97. Accordingly, claim 97 is now allowable.

The allowable subject matter of claim 101 was rewritten into its parent claim 103.  
Accordingly, claim 103 is now allowable.

**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 349-9587 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

SAM YANG

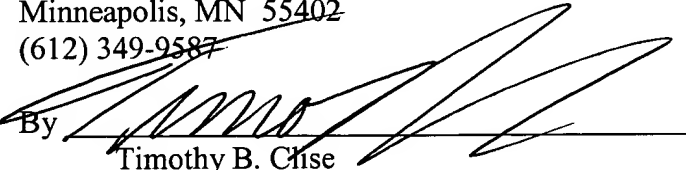
By his Representatives,

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Date

30 June '06

By

  
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**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 30 day of June, 2006.

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Signature

